(2) The CPDM, the device shall be programmed to automatically report end-of-shift concentration measurements as equivalent concentrations.

Mechanized mining unit (MMU). A unit of mining equipment including hand loading equipment used for the production of material; or a specialized unit which uses mining equipment other than specified in §70.206(b) or in §70.208(b) of this part. Each MMU will be assigned a four-digit identification number by MSHA, which is retained by the MMU regardless of where the unit relocates within the mine. However, when:

(1) Two sets of mining equipment are used in a series of working places within the same working section and only one production crew is employed at any given time on either set of mining equipment, the two sets of equipment shall be identified as a single MMU.

(2) Two or more sets of mining equipment are simultaneously engaged in cutting, mining, or loading coal or rock from working places within the same working section, each set of mining equipment shall be identified as a separate MMU.

MRE instrument. The gravimetric dust sampler with a four channel horizontal elutriator developed by the Mining Research Establishment of the National Coal Board, London, England.

MSHA. The Mine Safety and Health Administration of the U.S. Department of Labor.

Normal production shift. A production shift during which the amount of material produced by an MMU is at least equal to 80 percent of the average production recorded by the operator for the most recent 30 production shifts or for all production shifts if fewer than 30 shifts of production data are available.

Other designated occupation (ODO). Other occupation on an MMU that is designated for sampling required by this part in addition to the DO. Each ODO shall be identified by a four-digit identification number assigned by MSHA.

Production shift. With regard to an MMU, a shift during which material is produced; with regard to a DA of a mine, a shift during which material is produced and routine day-to-day activities are occurring in the DA.

Quartz. Crystalline silicon dioxide (SiO_2) not chemically combined with other substances and having a distinctive physical structure.

Representative sample. A respirable dust sample, expressed as an equivalent concentration, that reflects typical dust concentration levels and with regard to an MMU, normal mining activities in the active workings during which the amount of material produced is equivalent to a normal production shift; or with regard to a DA, material is produced and routine-day-to-day activities are occurring.

Respirable dust. Dust collected with a sampling device approved by the Secretary and the Secretary of HHS in accordance with part 74 (Coal Mine Dust Sampling Devices) of this title.

Secretary. The Secretary of Labor or a delegate.

Valid respirable dust sample. A respirable dust sample collected and submitted as required by this part, including any sample for which the data were electronically transmitted to MSHA, and not voided by MSHA.

Subpart B—Dust Standards

AUTHORITY: Secs. 101 and 103(h), Federal Mine Safety and Health Act of 1977, Pub. L. 91–173 as amended by Pub. L. 95–164, 91 Stat. 1291 and 1299 (30 U.S.C. 811 and 813(h)).

SOURCE: 45 FR 24001, Apr. 8, 1980, unless otherwise noted.

§70.100 Respirable dust standards.

(a) Each operator shall continuously maintain the average concentration of respirable dust in the mine atmosphere during each shift to which each miner in the active workings of each mine is exposed at or below 2.0 milligrams of respirable dust per cubic meter of air as measured with an approved sampling device and in terms of an equivalent concentration determined in accordance with §70.206 (Approved sampling devices; equivalent concentrations).

(b) Each operator shall continuously maintain the average concentration of respirable dust within 200 feet outby the working faces of each section in the intake airways at or below 1.0 milligrams of respirable dust per cubic meter of air as measured with an approved sampling device and in terms of an equivalent concentration determined in accordance with §70.206 (Approved sampling devices; equivalent concentrations).

§70.101 Respirable dust standard when quartz is present.

When the respirable dust in the mine atmosphere of the active workings contains more than 5 percent quartz, the operator shall continuously maintain the average concentration of respirable dust in the mine atmosphere during each shift to which each miner in the

active workings is exposed at or below a concentration of respirable dust, expressed in milligrams per cubic meter of air as measured with an approved sampling device and in terms of an equivalent concentration determined in accordance with §70.206 (Approved sampling devices; equivalent concentrations), computed by dividing the percent of quartz into the number 10.

Example: The respirable dust associated with a mechanized mining unit or a designated area in a mine contains quartz in the amount of 20%. Therefore, the average concentration of respirable dust in the mine atmosphere associated with that mechanized mining unit or designated area shall be continuously maintained at or below 0.5 milligrams of respirable dust per cubic meter of air (10/20=0.5 mg/m^3).

EFFECTIVE DATE NOTE: At 79 FR 24973, May 1, 2014, subpart B was revised, effective Aug. 1, 2014. For the convenience of the user, the revised text is set forth as follows:

Subpart B—Dust Standards

§70.100 Respirable dust standards.

(a) Each operator shall continuously maintain the average concentration of respirable dust in the mine atmosphere during each shift to which each miner in the active workings of each mine is exposed, as measured with an approved sampling device and expressed in terms of an equivalent concentration, at or below:

(1) 2.0 milligrams of respirable dust per cubic meter of air (mg/m^3).

(2) 1.5 mg/m^3 as of August 1, 2016.

(b) Each operator shall continuously maintain the average concentration of respirable dust within 200 feet outby the working faces of each section in the intake airways as measured with an approved sampling device and expressed in terms of an equivalent concentration at or below:

(1) 1.0 mg/m^3.

(2) 0.5 mg/m^3 as of August 1, 2016.

§70.101 Respirable dust standard when quartz is present.

(a) Each operator shall continuously maintain the average concentration of respirable quartz dust in the mine atmosphere during each shift to which each miner in the active workings of each mine is exposed at or below 0.1 mg/m^3 (100 micrograms per cubic meter or μg/m^3) as measured with an approved sampling device and expressed in terms of an equivalent concentration.

(b) When the equivalent concentration of respirable quartz dust exceeds 100 μg/m^3, the operator shall continuously maintain the average concentration of respirable dust in the mine atmosphere during each shift to which each miner in the active workings is exposed as measured with an approved sampling device and expressed in terms of an equivalent concentration at or below the applicable dust standard. The applicable dust standard is computed by dividing the percent of quartz into the number 10. The application of this formula shall not result in an applicable dust standard that exceeds the standard established by §70.100(a).

Example: Assume the sampled MMU or DA is on a 1.5-mg/m^3 dust standard. Suppose a valid representative dust sample with an equivalent concentration of 1.12 mg/m^3 contains 12.3% of quartz dust, which corresponds to a quartz concentration of 138 μg/m^3. Therefore, the average concentration of respirable dust in the mine atmosphere associated with that MMU or DA shall be maintained on each shift at or below 0.8 mg/m^3 (10/12.3% = 0.8 mg/m^3).

Subpart C—Sampling Procedures

AUTHORITY: 30 U.S.C. 811, 813(h), and 957.

SOURCE: 58 FR 63528, Dec. 2, 1993, unless otherwise noted.

§70.201 Sampling; general requirements.

(a) Each operator shall take respirable dust samples of the concentration of respirable dust in the active workings of the mine as required by this part with a sampling device approved by the Secretary and the Secretary of Health and Human Services under part 74 (Coal Mine Dust Personal Sampler Units) of this title.

(b) Sampling devices shall be worn or carried directly to and from the mechanized mining unit or designated area to be sampled and shall be operated portal to portal. Sampling devices shall remain operational during the entire shift or for 8 hours, whichever time is less.

(c) Upon request from the District Manager, the operator shall submit the date on which collecting any respirable dust samples required by this part will begin.

(d) During the time for abatement fixed in a citation for violation of §70.100 (Respirable dust standards) or §70.101 (Respirable dust standard when quartz is present), the operator shall take corrective action to lower the concentration of respirable dust to within the permissible concentration and then sample each production shift